

The invention provides bispecific antibodies with selective cytotoxicity against malignant B-cells. The bispecific antibodies bind to an effector cell antigen and to a 28/32 kDa heterodimeric protein on the surface of malignant B-cells. The invention also includes the monospecific components of the bispecific antibodies, humanized versions thereof, and humanized bispecific antibodies. The invention further provides therapeutic and diagnostic methods employing these antibodies.

1. *Chlorophyll a* (Chl *a*) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue and red regions of the visible spectrum. Chl *a* is essential for the light-dependent reactions of photosynthesis, where it converts light energy into chemical energy.

2. *Chlorophyll b* (Chl *b*) is an accessory pigment found in green plants and algae. It is a yellow-green pigment that absorbs light energy in the blue and orange regions of the visible spectrum. Chl *b* transfers the absorbed energy to Chl *a* for use in photosynthesis.

3. *Carotenoids* are a group of pigments that include carotenes and xanthophylls. They are responsible for the yellow, orange, and red colors seen in autumn foliage. Carotenoids absorb light energy in the blue and green regions of the visible spectrum and transfer the energy to Chl *a*. They also play a role in protecting the photosynthetic apparatus from damage by excess light energy.

4. *Xanthophylls* are a subset of carotenoids that are yellow in color. They absorb light energy in the blue and green regions of the visible spectrum and transfer the energy to Chl *a*. Xanthophylls are also involved in the photoprotection of the photosynthetic apparatus.

5. *Anthocyanins* are water-soluble pigments that are responsible for the red, purple, and blue colors in many plants. They are not directly involved in photosynthesis but can play a role in protecting the plant from environmental stressors like UV light and herbivores.